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THE HEART AS A TARGET IN PSYCHOLOGICAL DISTURBANCES*

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The term 'functional' in regard to the heart should be reserved for disturbance of rhythm and should not be applied to the disorders which we are discussing.

Clinical conditions with reference to the heart may be divided into:

a. Organic Heart Disease—Congenital and Acquired.
b. Functional Disturbance of Rhythm.
c. Organic conditions which simulate heart disease but have their pathogenesis in other organs.
d. Psychological Disturbances.

These exist singly or in combination one with the other. It is most urgent to single out the group with psychological basis or, in the case of true organic disease, to assess how much of the symptomatology is due to psychological factors. The concept of heart disease once fixed in a patient's mind is most difficult to eradicate. There must be three alternatives in the mind of the medical attendant, either the case is one of heart disease or it is not, or the diagnosis is uncertain. In the latter another opinion should be sought.

Early cardiac mischief when acquired is generally symptomless and this is also true of many cases of congenital abnormality. To diagnose a psychological condition organic disease must be excluded. This includes a careful history of previous illnesses, of detailed symptoms and their march, and a careful clinical examination of all the systems which should be backed, in special cases, by X-ray screening and electrocardiographic studies. Particular enquiry must be made as to those acute or chronic infections which are known to involve the heart. A condition should not be labelled organic if there are functional disturbances of rhythm unless there are other indications of heart disease, and it is under such circumstances that palpitation has to be considered. This may be an acceleration of sinus rhythm which is common in organic and psychological conditions alike. It may denote premature contractions described by the patient as 'bump' or 'turning over of the heart' or in many other ways. It may mean the occurrence of true paroxysmal tachycardia in which the attacks begin and end sharply. The diagnosis may depend on the intelligence of the patient unless the attack is witnessed by the medical observer when its high rate and lack of reaction to exercise will denote its nature. It may mean the onset of auricular flutter or fibrillation which, although functional by definition, are generally accompaniments of organic heart conditions.

Broadly speaking the symptoms of heart disease begin with breathlessness, with pain of a definite nature or in rare cases with giddiness or syncope. All three symptoms are to be found in psychological disturbances but on analysis they are found to be of different natures. In organic conditions the breathlessness begins insidiously and on exertion. In psychological conditions it is often marked from the beginning and is short, shallow and rapid, interspersed with sighing: the subject complains that he cannot get a satisfactory deep breath and it is present at rest and there is never orthopnoea.

* This paper was read at the Medical Congress of the Association held at Cape Town in September 1949.

The pain of organic heart disease is found in pericarditis and in coronary artery insufficiency. The former is relatively rare, it is sharp and persistent in an area over the praecordium and the diagnosis is clinched by other signs of pericardial involvement. In coronary conditions the pain is generally burning, gripping or constricting. It involves the mid-line region, generally substernally (there are rare exceptions) and has a radiation to the arms, shoulders, face, jaw, back or epigastrium or vice versa. When the coronary ischaemia is intermittent it is related to exercise particularly after a meal or excitement and generally, but not always, brings the patient to a standstill. In rare cases the patient can walk it off. In the protracted pain of persistent ischaemia due to coronary blockage the pain is of the same nature but is accompanied by shock and restlessness and not infrequently by disturbances of rhythm. The radiation of the pain is explained by the afferent supply of the cardiac nerves and by their relation to the descending portion of the third branch of the trigeminal nerve. Now other organs and structures have a similar nerve supply and such coronary pain has to be distinguished from pain from these sources. To mention some, diseases of the vertebral column, arthritis of the shoulder with pectoral muscle pain which may be accentuated by exercise, brachial neuritis, fibrositis of the muscles of the chest wall, diaphragmatic conditions including eventration, pleurisy and hernias, also oesophageal spasm and parietal pleurisy. It is those that cause mid-line pain such as oesophageal spasm and some diaphragmatic hernias and pleurisies, and those that cause pain down the arm in exercise such as arthritis, that often cause confusion. Their differentiation depends on a careful history, clinical examination and in doubtful cases electrocardiographic tracings before and after exercise.

In psychological disturbances the pain is left inframammary in position, sometimes accompanied by pain in the right infra-mammary region also. It is either dull aching in type and persistent or is described as needle-like in intensity and lasting for seconds. It is generally accentuated by emotion or exercise and rises gradually to a peak in the persistent type. Coronary pain of angina pectoris is more abrupt in onset and rises suddenly to a peak and follows the same area of origin and radiation time after time. There is a further type of pain in psychological conditions which arises first in one area and then in another and is either of the aching or the needle-like type. It may be fibrositic in origin but often gives rise to fear.

Faintness, giddiness and syncope in organic heart disease is due to heart block at the auriculo-ventricular junction, a condition readily recognised by the bradycardia or asystole accompanying the attacks. There are other conditions such as vaso-vagal attacks, carotid sinus sensitivity, sino-auricular block, Ménière's syndrome, tympanic pressure and inter-cerebral mischief which have to be considered in this connection and differentiated by their various physical concomitants; but the giddiness and syncope of psychological disturbances is generally accompanied by a quick pulse and other stigmata of the condition.

The tremor of their disturbances is generally of the coarse variety and may affect the hand only or whole groups of muscles involving the limbs. It occurs in static positions or in movement and is quite different from the fineness of the movement in Grave's Disease and from the tremor of organic nerve disease. Sweating occurs in these psychological conditions especially of the axillae and of the hands which are often cold and blue, contrasting with the sweating of exercise, which is generalised, and that of coronary pain which is distributed on the brow, face and sometimes chest.

The early differentiation of early pulmonary tuberculosis and of early Grave's Disease may give rise to difficulties. If these conditions cannot be excluded clinically an X-ray picture in the former, a basal metabolism in the latter should be conclusive.

We now pass to the consideration of the causes and symptomatology of psychological disturbances with the heart as its target.

The neuro-psychiatrist is daily confronted with the following symptom complex:

1. Breathlessness.
2. Palpitation.
3. Pain in left side of chest.
4. Sweating.
5. Tremor.

and a good many other symptoms such as fatigue, giddiness and fainting attacks. The above symptom complex when severe has variously been labelled as Effort Syndrome, Da Costa's Syndrome, Soldier's Heart, D.A.H. and by the Americans as Neuro-circulatory Asthenia.

1. The difficulties in naming this symptom complex are firstly due to the fact that it has been regarded as a disease *sui generis* which obviously it is not.

2. Breathlessness, palpitation and pain in the left side of the chest may all, when considered superficially, point to an organic lesion of the heart.

3. The medical man may be playing for safety. He is dubious about the diagnosis. He is, however, of the opinion that it is safer to regard the condition as serious; and then talks about a strained heart, a tired heart and puts the patient to bed at complete rest for weeks on end.

4. Medical men have it drummed into them from early student days that to miss an organic condition is the cardinal sin in medicine but to ignore a psychological one is not serious.

5. Organic disease may be present and yet the most distressing symptom may still be psychogenic. The former is always stressed and the latter often ignored.

6. A history of remote, serious or protracted illnesses, undue fatigue or over-work is often obtained in these cases. The psychological effect these episodes have in predisposed individuals is hardly ever considered.

Sudden fright produces palpitation, tachycardia, sweating and an increase in respiratory rate. The effect of long continued fear, tension or anxiety in the production of persistent cardio-vascular symptoms is of course equally obvious, and is the commonest cause of the symptom complex.

A number of workers have suggested that hyper-

ventilation might explain this symptom complex. Friedman in his studies concerning the aetiology and pathogenesis of neuro-circulatory asthenia has evolved a simple test for the diagnosis and assessment of the syndrome. Apnoea was made a voluntary maintained function before and after a prescribed period of hyperventilation. The patient held his breath after a preliminary deep inspiration as long as he was able to do so. The number of seconds he refrained from inspiration was noted and recorded. He was then instructed to breathe deeply and rapidly for 45 seconds. Immediately at the end of the period he was instructed to hold his breath once more for as long as he was able to do so. The number of seconds he refrained from breathing was again recorded. A ratio which he called the Hyperventilation Index was then obtained by dividing the breath-holding time after hyperventilation. Then if a subject held his breath 60 seconds before hyperventilation and 90 seconds after hyperventilation, the hyperventilation index would be calculated as 90/60 or 1.50.

In patients suffering from neuro-circulatory asthenia the index was low, that is they were not able to hold their breath after hyperventilation as long as the normal controls. Patients with organic heart disease or pulmonary disease had a high hyperventilation index that is hyperventilation improved their ability to hold their breath. In patients who had both organic heart or pulmonary disease and in addition suffered from neuro-circulatory asthenia the index was again low. He concluded that this test presented a positive diagnostic method.

Paul Wood in his Goulstonian Lectures to the Royal College of Physicians, London 1941, in discussing the hyperventilation theory states: 'The total evidence indicates that hyperventilation cannot be held responsible for the symptoms and signs of Da Costa's Syndrome, either by causing tissue alkalosis or by interfering with the circulation; but it does occur in some and when present must aggravate certain of the symptoms. In any case spontaneous hyperventilation is not a diagnosis but, apart from rare organic causes, merely one mechanism by which psycho-somatic manifestations are produced'.

Experimental work by Ranson and his co-workers, Masserman and Friedman, on the hypo-thalamus has demonstrated that stimulation of that area of the brain produces somatic symptoms indistinguishable from that seen clinically in the man suffering from anxiety states. How the stimulation takes place is uncertain but nerve fibres connecting the hypo-thalamus, the thalamus and cortex have been demonstrated, and it has been widely accepted that the somatic symptoms of anxiety-states is due to stimulation of the hypo-thalamus. The first step therefore when confronted with this symptom complex is a correct and early diagnosis.

The manner in which this syndrome should be dealt with and differentiated from organic disease has already been demonstrated. It should, however, be remembered that the emotions may act on a damaged cardio-vascular system as well as on the intact system. To make this diagnosis, the doctor must have an understanding of the significance of the presenting symptoms and he must be able to separate the wheat from the chaff. He must also have some knowledge of the psycho-pathology of anxiety.

Without going into great detail it can be simply stated that anxiety neurosis, which is the commonest psycho-neurotic disorder, represents a difficulty and confusion in the management of instinctive impulses. The nature of these impulses, particularly if of a sexual, aggressive or resentful nature is commonly unknown to the patient. Since, for everyone life presents situations which arouse impulses that cannot properly be immediately executed everyone may expect to experience anxiety at times. It is when the impulses are unacceptable and have to be repressed that anxiety reactions take place.

It is obvious from the above that in severe cases prolonged psycho-therapy may be necessary and should be undertaken by a psychiatrist. In less severe cases, however, and more especially when somatic symptoms are recognised early as psychogenic in origin, simple reassurance that the examination reveals no evidence of organic disease may suffice.

As in every condition we encounter, the first step in the diagnosis is a careful history, not only of the present presenting symptoms but also of the family history, early childhood environmental factors; the patient's personal attitudes, reactions and pattern of living must be taken into account. In such a biographical history, life situations will be come manifest to the examiner and thus gain the insight into the patient as an individual and enable us to make a proper psychiatric diagnosis in the majority of cases.

The psycho-therapeutic value of such a history is of the utmost importance in that the patient often realises the mechanism and the purpose of the symptoms. The medical man has a grave responsibility to patients who suffer from this syndrome. An early diagnosis and a proper handling of these problems in its early stages should make it possible to rehabilitate the vast majority of these cases.

Besides the psychological treatment the general practitioner must be aware of the following complicating and aggravating conditions which may be present—chronic infections such as malaria, dysentery and chronic sinusitis, or even pulmonary tuberculosis or allergic states. Tobacco in excess is known to cause tachycardia and dyspnoea and often there is a vicious cycle. We cannot overstress the importance of an early, firm diagnosis with a definite explanation to the patient. This may save years of chronic ill health. The diagnosis must be based on positive evidence of a psycho-neurosis and not merely on the evidence of absence of organic disease. The mechanism of the symptom should be fully explained to the patient in simple terms but also with conviction. The use of drugs without such an explanation is often futile and is thus bad medicine. The chronic case will require detailed and prolonged psychotherapy in the hands of a psychiatrist. The prognosis, as in all chronic conditions, even in expert hands is often very poor. This symptom complex has been puzzling medical men ever since it was first described by Da Costa in 1871, and only of late years has the psychological basis for its symptoms and pathogenesis been understood.

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EDITORIAL

SPECIFICATION FOR DISINFECTANTS

Disinfectants manufactured in accordance with the quality specification for disinfectants recently published by the Standards Council* will have proven germicidal properties, will not stain and when diluted with water will form a stable emulsion.

Manufacturers making disinfectant fluids in accordance with the Council's quality specification may under permit from the Standards Council apply the S.A.B.S.-ellipse mark (which is the Council's standardization mark) to their products. Purchasers buying disinfectants bearing the mark will thus be assured that they are obtaining a thoroughly satisfactory product.

The specification was prepared by a committee specially appointed by the Standards Council at the request of manufacturers who felt it was important that the public should be provided with a true guide as to the effectiveness of various disinfectants as germicidal agents and that a standard method for testing the potency of disinfectants should be adopted. Disinfectant manufacturers were represented on the committee and actively co-operated in laying down standards which would ensure that disinfectants made in conformity with the requirements of the specification would be thoroughly suitable for all disinfecting purposes.

The specification covers both black and white disinfectant fluids and specifies composition, emulsion stability, sedimentation and separation, staining properties and grades which are based on the minimum Rideal-Walker coefficient. Four grades are given for black and three for white disinfectant fluids. Requirements regarding packaging, labelling and marking are also included.

The Rideal-Walker coefficient is the means used to indicate the germicidal potency of a disinfectant fluid. The Rideal-Walker test is actually the determination of the value of a disinfectant according to the amount required to prevent the growth of *Bacillus typhosus*

* Copies of the specification, which should provide a useful guide to both manufacturers and users of disinfectants, are obtainable at a cost of 5s. per copy, post free, from the South African Bureau of Standards, Private Bag 191, Pretoria.

VAN DIE REDAKSIE

SPESIFIKASIE VIR ONTSMETTINGSMIDDELS

Ontsmettingsmiddels wat vervaardig is volgens die kwaliteitspesifikasie vir ontsmettingsmiddels wat onlangs deur die Raad vir Standaarde uitgegee is*, sal op die proef gestelde kiemdodende eienskappe besit, geen vlekke maak nie en wanneer met water verdun 'n stabiele emulsie vorm.

Fabrikante wat vloeibare ontsmettingsmiddels volgens die Raad se kwaliteitspesifikasie vervaardig, mag met toestemming van die Raad vir Standaarde, die S.A.B.S.-ellipsmerk, wat die Raad se standaardmerk is, op hul produkte aanbring. Kopers wat ontsmettingsmiddels met die merk daarop koop, kan dus verseker wees dat hulle 'n produk kry wat in alle opsigte bevredigend is.

Die spesifikasie is opgestel deur 'n komitee wat spesiaal deur die Raad vir Standaarde aangestel is op versoek van fabrikante wat gevoel het dat dit belangrik is om 'n behoorlike leidraad vir die publiek te verskaf in verband met die doeltreffendheid van verskillende ontsmettingstowwe as kiemdodende middels en dat 'n standaardmetode vir die toets van sterkte van ontsmettingsmiddels aangeneem behoort te word. Ontsmettingsmiddelfabrikante was op die komitee verteenwoordig en het aktiewe samewerking verleen by die vasstelling van standaarde wat sal verseker dat ontsmettingsmiddels wat volgens die vereistes van die spesifikasie gemaak is, volkome geskik is vir alle ontsmettingsdoeleindes.

Die spesifikasie dek sowel wit as swart ontsmettingsvloeistowwe en bevat voorskrifte wat betref samestelling, stabiliteit van die emulsie, sedimentasie en skeiding, kleurvermoë en grade, wat gebaseer is op die minimum Rideal-Walker-koëffisiënt. Vier grade word vir swart en drie vir wit ontsmettende oplossings gegee. Vereistes wat betref verpakking, etikettering en merke is ook daarin vervat.

Die Rideal-Walker-koëffisiënt is die middel wat gebruik word om die kiemdodende vermoë van die ontsmettingsmiddel aan te gee. Die Rideal-Walker-toets is eintlik die bepaling van die waarde van 'n ontsmettingsmiddel volgens die hoeveelheid daarvan wat nodig is om die groei van die bacillus typhosos (Lister-stam) by

* Eksemplare van die spesifikasie wat 'n nuttige leidraad vir sowel fabrikante as gebruikers van ontsmettingsmiddels behoort te wees, is teen 5s. per stuk, posvry, verkrygbaar by die Suid-Afrikaanse Buro vir Standaarde, Privaatsak 191, Pretoria.

(Lister strain) under standard working conditions. A 5% solution phenol (carbolic acid) is taken as the standard for comparison. A bacterial assay is made on both the control and test solutions, the two experiments being carried out simultaneously under identical conditions and the power of the unknown is expressed in terms of its performance as compared with that of the 5% phenol solution. This power is known as the Rideal-Walker co-efficient of the disinfectant being tested.

standaardwerktoestande te voorkom. 'n 5%-fenoloplossing (karbolsuur) word as 'n standaardvergelykingsvloeistof geneem. 'n Bakteriebepaling word op sowel die kontrole- as die toetsoplossing gedoen; die twee proewe word gelyktydig en onder presies dieselfde omstandighede uitgevoer en die mag van die onbekende word uitgedruk in terme van sy werkverrigting in vergelyking met dié van die 5%-fenoloplossing. Hierdie mag staan bekend as die Rideal-Walker-koëffisiënt van die ontsmettingsmiddel wat getoets word.

THE APPROACH TO VASOMOTOR RHINITIS*

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A patient presents himself with a symptom-complex suggestive of hay-fever, sinusitis or a 'cold in the head', characterized by paroxysmal attacks of sneezing, engorgement of the nasal mucosa with nasal obstruction and a profuse watery, mucoid discharge from the nose. The matter appears simple until the patient enlarges on his symptoms and states that he suffers from 'chronic colds', is 'never without a cold', 'catches colds easily', his colds 'hang on for weeks' or has had 'colds since childhood'. It is then that the physician is faced with the clinical problem of vasomotor rhinitis which is all too frequently dismissed as of relatively minor importance. In children where the condition may take the form of a 'running nose' or even only an intermittent 'sniff', the tendency to treat the matter lightly is increased as the child and the family become accustomed to the symptoms which, to all appearances, do not lead to the development of more serious manifestations. The suggestion that the child will 'grow out of it' sometimes unfortunately comes from the doctor.

To those not familiar with the condition it seems unbelievable that the symptoms, particularly in the chronic form of vasomotor rhinitis, could be so trying to the sufferer or be the forerunner of serious respiratory disease or be so indicative of the complexities in the patient's life.

Kern (1947) considers that this condition is the most important, the most neglected and the worst treated of any of the allergies of the upper respiratory tract. Patients as well as doctors delay the institution of treatment until superimposed infection has occurred in the nose and sinuses or until a nose blocked with polypi forces them to obtain assistance, or when asthma appears as a sequel. Kern showed, in a series of cases of vasomotor rhinitis, that the interval which elapsed between the onset of symptoms until diagnostic skin tests were carried out in the search for an allergic etiology was more than five years in 50%, more than ten years in 33% and more than 15 years in 25% of the cases.

Thacker (1946) has shown that 20% of vasomotor rhinitis patients had a therapeutic history of previous nasal or sinus surgery, submucous resection, diathermy, cauterization of the sinuses, nasosinal openings, radium and X-ray application before the true nature of the condition had been recognised. The delay in adequate treatment becomes the more serious when it is realised that numerous cases of intrinsic asthma commenced insidiously many years previously as vasomotor rhinitis, and that the prompt and effective treatment of the latter in its early stages would probably have been effective in the prevention of the asthma that followed.

Terminology. The term 'vasomotor rhinitis' is not a satisfactory name for the condition. There is no true inflammation and vasomotor rhinorrhoea is perhaps the better descriptive word. The symptom-complex has been referred to as hyperaesthetic rhinitis, perennial hayfever, perennial rhinitis, allergic rhinitis, allergic coryza, nasal allergy, etc. Bernfeld (1945) suggested the term 'rhinopathia allergica' for the condition if it had an allergic basis and 'rhinopathia incretoria' or 'hormonal allergosis' where an endocrine disturbance could be incriminated.

Symptoms and Signs. Among the more constant features of the condition are sneezing, a profuse watery, mucoid nasal discharge and interference with breathing on account of blocking of the nasal passages.

Constitutional symptoms are generally absent but in the course of time the patient tends to become listless, tired, nervous and with the feeling that the condition is 'getting him down'.

In some cases an irritable cough is present due to the postnasal drip of secretion, or indeed to an associated bronchial allergy. Nasal itching, a diminution or even loss of the sense of smell may be present in some cases. When the condition is becoming chronic patients complain of a feeling of fullness or pressure at the root of the nose and in the region of both antra as well as dull headaches in the frontal region.

*This paper was read at the Medical Congress of the Association held at Cape Town in September 1949.

If a superimposed bacterial infection occurs the condition is aggravated, the nasal secretion becomes purulent and constitutional symptoms appear.

Examination of the nose and paranasal sinuses reveals characteristic signs. The nasal mucous membrane is pale, oedematous and moist. The colour varies from pale pink to bluish-purple depending upon the stage of oedema and venous congestion present. The pinkish red colour of inflammation is not seen. The mucous membrane is generally hyperaesthetic and, particularly in early cases, retracts readily to decongestants.

The turbinates are usually swollen and, in long-standing cases, the mucous membrane may be markedly hypertrophied even to the formation of polypi. Sinusitis is frequently associated with the condition and is an extension or accompaniment of the nasal condition. The thickened mucous membranes of the sinuses produce on transillumination an appearance of haziness in the antra and, in the absence of superimposed infection, irrigation of the sinuses results on clear returns. Eosinophile cells seen in smears made from the nasal secretions confirm an allergic background to the condition, but their absence does not necessarily rule out such a factor.

The characteristic pathological features of the condition were shown by Hansel (1929) to include oedema, thickening and hyperplasia of the epithelium of the mucous membranes of the nose and paranasal sinuses with a tendency to polypoid degeneration. There is an infiltration of the epithelial structures with eosinophiles together with varying amounts of mononuclear cells, round cells and lymphoid cells. The subepithelial and periosteal layers show connective tissue proliferation with dilatation, compression and atrophy of the glands and dilatation, thickening and compression of the blood vessels. The bone may show hyperplasia and atrophic process.

Whom Should the Patient Consult? As the symptoms are mainly confined to the nose the patient is usually referred to the ear, nose and throat surgeon. But it is questionable whether the condition is one which falls within that specialty except for that very essential screening to eliminate gross anatomical defects which may be factors in aggravating the symptoms.

In the absence of such defects do the investigations and treatment of the condition fall within the province of the ear, nose and throat surgeon or more properly within the sphere of the general physician? In other words, are we dealing with a local naso-sinus condition or with a general aberration in health with the nasal symptoms so markedly manifest as to dominate the picture for the patient and, all too often, for the doctor?

Is Vasomotor Rhinitis a General or a Local Disease? Paterson (1945) regards vasomotor rhinitis as a nervous imbalance possibly of endocrine origin, not found in normal, happy people and which would disappear if the normal vasomotor balance were righted. He insists that the chief cause of most of the trouble in vasomotor rhinitis is the psychological make-up of the individual; he gives family and personal affairs, sex, lonesomeness, boredom, temper, groundless fears, mental and physical fatigue and frustrations as factors which render the person liable to the outward manifestations of which he is complaining.

CLASSIFICATION OF VASOMOTOR RHINITIS

Vasomotor rhinitis can, from an etiological point of view, be classified into:

a. Seasonal allergic vasomotor rhinitis.

b. Perennial or non-seasonal allergic vasomotor rhinitis.

c. Intrinsic vasomotor rhinitis.

a. Seasonal Allergic Vasomotor Rhinitis, is, in fact, hay-fever or seasonal pollen allergy and need not be enlarged upon here as the methods of skin testing and desensitizing with suitable pollen extracts are well known.

b. Perennial or Non-seasonal Allergic Vasomotor Rhinitis is an allergic condition in which pollen sensitivity plays no part. The etiological agents are those with which the patient is in close and constant association and include such inhalant allergens as house dust, occupational dusts, the danders and hair of animals, feathers, orris root and certain odours, fumes and smokes. In addition, ingestant allergens are frequently involved and these are usually foods and often drugs. Any foodstuff may be found etiologically important but experience has shown that the foods which are most commonly responsible are wheat, egg, milk, chocolate, tomato, pork, orange, peas, beans, onion and beef.

c. Intrinsic Vasomotor Rhinitis. After exhaustive clinical examinations and extensive skin tests have been carried out, all with negative results, there remains a group of sufferers from vasomotor rhinitis of unexplained etiology. The classical symptom-complex is present but no definite allergen can be incriminated by any of the means available to the allergist. Many workers are inclined to regard all forms of vasomotor rhinitis as a basically allergic condition in which an allergen is of necessity present but which has, for technical or other reasons, not yet been exposed.

There is reason to believe however, that, more important than any allergen in precipitating the attacks, is emotional disturbance in the patient where, perhaps, the endocrine factor is the ultimate element.

With this group the physician often finds on his hands a patient miserable with his symptoms and frequently destined to live on palliatives which produce temporary relief and which tend to lose their effectiveness in course of time. Or, perhaps the physician does not have the patient on his hands for very long, because sufferers tend to migrate from doctor to doctor in their quest for relief.

Both vasomotor rhinitis and bronchial asthma may be regarded as essentially the same condition except that the shock organ in the latter is the bronchial mucosa whereas in vasomotor rhinitis it is the nasal mucosa. In each case the condition may be of extrinsic or intrinsic origin. Mitchell and his co-workers (1947) have differentiated the two forms of these conditions. In the extrinsic form the allergic origin can be clearly defined by means of positive skin tests in persons who are otherwise reasonably well-adjusted. In the intrinsic form of these conditions skin tests are negative and even if positive, cannot be related to the symptoms. This group is characterized by personality maladjustments, multiplicity of complaints, fatigue, exhaustion and

insomnia. They are persons indeed with emotional conflicts, hostilities and life-plan confusions. Hollender (1948) regards vasomotor rhinitis as a dynamic process which must be considered in terms of the total organism; the picture presented at a particular moment depends upon the interaction of a number of forces and the intensity and duration of the physio-psychological changes.

Mechanism of Intrinsic Vasomotor Rhinitis. The connection between the allergic, psychogenic and endocrine components in asthma or vasomotor rhinitis of the intrinsic variety has been considered by a number of workers, and suggestive and interesting lines of thought have been advanced.

Urbach and Gottlieb (1946) offer two explanations; they feel that emotional influences produce an alteration in the excitability of the autonomic nervous system and stimuli (e.g., allergens) which until then were on the sub-threshold level acquire the capacity of acting as allergens. Alternatively, psychic stimuli, by their effect on the vascular innervation, bring about a change in the blood-supply of the peripheral tissue. The result is that pathological substances which normally cannot penetrate the vessel walls are now absorbed, producing an antigen-antibody reaction. Paterson (1945) holds that the stimulation of the sympathetic gives rise to an increased vasodilatation with increased permeability of the capillaries resulting in oedema of the nasal mucosa. Stovin (1941) thinks that oedema has some connection with the amount of sodium in the body fluids which in turn is probably controlled by the adrenal cortex. In vasomotor rhinitis the extracellular fluid in the stroma of the mucous membrane is derived from the blood stream and contains an excess of sodium in contradistinction to the intracellular fluid which contains potassium. He finds that most cases show a generalised glandular and vasomotor malfunction. He quotes Fabricant who explains the readiness for bacterial invasion to occur where nasal dysfunction exists, by the fact that in susceptible persons emotional states produce transient conversions of the nasal secretions from a normal slightly acid state to an alkaline condition which is favourable to bacterial development.

THE APPROACH TO THE DIAGNOSIS AND TREATMENT IN A CASE OF VASOMOTOR RHINITIS

(*a*) *Diagnosis.* The importance of a full and detailed history of the patient cannot be over-estimated. From the history alone the allergic or other etiology of the condition may very often be established. The presence of allergy in the patient's family and associated allergies in the patient himself, both in the past or at present, is a valuable pointer to an allergic basis in the patient's condition. The patient's occupation is often an important factor in the nasal allergy, for allergic vasomotor rhinitis in bakers, carpenters or pharmacists is not rare where the allergen may be due to the inhalation of flour, wood dust or drugs respectively.

If the condition is unrelated to the seasons, enquiry should be directed to contact with feathers, to the handling of animals, to the influence of house dust or orris root face powders and other possible inhalants.

The effect upon the condition of temperature and climatic changes should be considered.

The patient might provide, on enquiry, an insight in regard to his reactions to various foodstuffs. Itching of the skin or of the nose after food should lead one to suspect a food allergy as also such symptoms as nausea, colic, vomiting, diarrhoea, burning of the lips or of the mouth. The appearance of a rash of the urticarial or erythematous type affords further indications of food allergy.

The confirmation of the presence of allergic conditions can, in the case of inhalant substances, readily be carried out by the method of skin testing with extracts of the suspected substances. Unfortunately skin testing with food extracts is by no means as reliable. Nevertheless the tests should systematically be carried out and any clue obtained followed up by means of clinical observation. Trial diets and elimination diets should be instituted.

There is no short cut to a specific diagnosis of food allergies and careful methodical observations should be made by the doctor who should obtain the co-operation of the patient.

Some forms of vasomotor rhinitis obviously appear to be associated with endocrine influences. This is seen in the adolescent period where the condition may be favourably or otherwise modified. Similarly in women amelioration or deterioration of the vasomotor rhinitis is noted in the various stages of pregnancy, the menopause and in ovarian dysfunction. Thacker (1946) is of opinion that the condition is often secondary to menstrual disorders, hypothyroidism and diseases associated with or affecting the sympathetic nervous system.

The possible association in the patient's condition of physical agents such as light, cold or heat can usually be readily confirmed by the personal history of the patient as well as by clinical trial.

Whether or not an undiscovered allergy is at the root of the trouble, one cannot but be in whole-hearted agreement with Karnosh (1944) that no allergic person can be adequately evaluated without considering the personality structure in which the disease is implanted.

A thorough clinical examination should be carried out on the patient to eliminate constitutional disorders, and special investigation made of the nose, nasopharynx and sinuses to ensure that pathological conditions are not locally present which in themselves might be potent contributory factors in the patient's condition. Features such as a deviated septum, nasal spurs, enlarged adenoids, atresia, benign or even malignant new growths would require surgical intervention for relief.

The question of sinus infection should be settled as soon as possible. The presence of nasal polypi or polypoidal turbinates poses the first problem with regard to surgical intervention. Experience teaches that these are characteristic features of the allergic state. There is often a clear indication for the removal of such gross obstructions. The fact should be borne in mind however, that operative procedures in an allergic person not infrequently result in the acquisition of new allergies or aggravation of his present allergic sensitivities. If the occluding malformations are not of too serious a nature

the possibility of instituting allergic treatment prior to operative procedures should be carefully studied.

A clue as to whether a nasal discharge is due to bacterial infection or is the result of an allergic condition can frequently be obtained on the result of the microscopic examination of smears made from the nasal secretions. The watery nasal secretion in allergic states generally shows considerable numbers of eosinophile cells whilst in an infection the secretion is mucopurulent, eosinophiles are not present, and neutrophile cells predominate and are found together with bacteria which can readily be cultivated. Not infrequently however, a bacterial infection may mask an underlying allergic state. There is the possibility that the patient may have been sensitized to the bacteria from an infection, but bacterial allergy is by no means easy to establish and, before such a diagnosis is made the presence of a non-bacterial allergy should be excluded. There is no reason, theoretically, why a bacterial and a non-bacterial allergy should not be co-existent. Nevertheless in the clinical approach to a case the bacterial infection should be properly controlled along the usual lines and at the same time an attempt made to discover whether such infection is primary or secondarily superimposed on an allergic condition. The nasal smears in such a mixed pathological condition show both eosinophiles and neutrophiles. It is of interest to note that polypi are rae in a true primary infection.

A summary of the more important features in allergic rhinorrhoea and bacterial rhinitis is given in the following table:

	Allergic Rhinorrhoea	*Bacterial Rhinitis*
Onset	Sudden	Gradual
Sneezing	+++	+−
Itching of nose	+++	+−
Nasal discharge	Watery, mucoid profuse	Thick muco-purulent
Nasal obstruction	Present	Marked
Improvement with adrenaline	Yes	No
Constitutional symptoms..	No	Yes
Allergic skin reactions ..	Yes	No
Other associated allergies and allergic family history.	Yes	Not necessarily
Attacks	Multiple, recurring or constant	Occasional, free between attacks
Nasal smears	Eosinophiles	Neutrophiles
Nasal mucous membrane ..	Pale oedematous	Hyperaemic

(*b*) *Treatment.* It is of the greatest importance to provide adequate treatment to children who are sufferers from vasomotor rhinitis. The chances of preventing the complications and sequelae of the condition are increased the earlier the allergic or other factors are brought under control.

The treatment of a case of vasomotor rhinitis will obviously depend on the diagnosis of the variety of the condition that is present.

Local treatment of uncomplicated vasomotor rhinitis is of little value and should be avoided. Even the best local treatment is only palliative. Nasal drops and sprays and other local decongestants will generally restore normal respiration temporarily but should be used sparingly and with caution for, with their use, secondary nasal congestion may be produced. Local nasal medication has the further disadvantage that allergic subjects are liable to develop a sensitivity to the drugs employed, with a consequent aggravation of symptoms. Temporary relief may be obtained by the use of one or other of the many antihistaminic drugs now available for administration by the oral route.

Surgical operations on the nose should be avoided except where gross abnormalities exist. In allergic persons, if at all possible, operative procedures should only be carried out after the allergy has been brought under control. Similarly the removal of tonsils and adenoids should not be advocated in children before adequate hyposensitization has been carried out. Piness and Miller (1939) found that in 655 children 17% developed their first allergic symptoms after tonsillectomy and adenoidectomy. Further, if there is a known seasonal allergy in a case, operation should be delayed to the season when specific pollination is not occurring.

Relief from nasal obstruction by ionization and the electrocautery has disadvantages; radium therapy is uncertain and dangerous, but recently X-ray treatment has been reported as satisfactory in some 85% of cases. X-rays appear to have an action on the blood vessels of the mucous membranes rendering them insensitive to the antigens.

It has already been mentioned that the presence of polypi indicates an underlying allergic condition. Polypi will almost certainly recur after removal if the allergic condition remains unattended to. Polypi which obviously contribute to nasal obstruction should be removed in the non-pollen season if possible but allergic sensitization should be instituted forthwith. Better still, desensitization should be completed before their removal.

Bacterial vaccines may be used in the presence of a superimposed infection, but, here again, specific desensitization of the patient should be carried out simultaneously if satisfactory results are to be expected. In a suspected case of bacterial allergy bacterial desensitization may be carried out using minute commencing doses of a vaccine made from the organisms recovered. Vaccines may sometimes also be given for their non-specific effect.

Diet control has frequently been recommended in the treatment of vasomotor rhinitis but, on general principles, this is indicated if a food allergy is suspected or proved in a particular patient; otherwise there would appear to be no particular virtue in this procedure.

Histamine desensitization is often indicated in physical allergies where control of the excitant is difficult.

Where exhaustive clinical examination and search for responsible allergens have yielded no information as to the cause of the condition, the nasal condition of the patient should be regarded as a local manifestation only of a general constitutional reaction, and with Stovin (1941) one would agree that treatment should include a consideration of the autonomic nervous system and its association with the endocrine glands. Endocrine dysfunction should be enquired into and the appropriate measures applied.

The psychotherapeutic approach is essential in many of the patients. The restoration of their peace of mind is called for. It may become necessary to reorientate the patient's outlook on his circumstances. He should be

given an opportunity to talk about himself and his activities. If the sessions are wisely conducted on established psychotherapeutic lines, the resolution of conflicts and the breaking down of emotional barriers are soon reflected in the improved nasal condition of the sufferers.

One comes back to the question as to whom the vasomotor rhinitis patient should consult for relief of his symptoms. The answer can only be—the competent general practitioner through whom a 'screening' can take place. It will then be decided whether the ear, nose and throat surgeon should play some preliminary part in the therapeutic programme, whether the doctor himself will continue treatment on allergic or psychotherapeutic lines or whether he will obtain the assistance of the specialist in allergy or in psychotherapy. But the important thing is not so much who will treat the patient, as the development of a sane approach which is neither nasal, allergic or psychological but which regards the sufferer from vasomotor rhinitis as a human being whose total equilibrium has been disturbed, but who is conscious only of his nose troubles. The treatment of vasomotor rhinitis demands knowledge, judgment and understanding of the man, his background and his personality.

SUMMARY

Vasomotor rhinitis is a condition in which the characteristic symptoms are paroxysmal attacks of sneezing, nasal obstruction and a profuse watery mucoid discharge without constitutional symptoms. The important signs in the nose and paranasal sinuses include a pale, oedematous, moist, hyperaesthetic mucous membrane sometimes hypertrophied to the stage of polyp formation and often with eosinophile cells in the nasal secretion.

The condition is etiologically classified into (*a*) Seasonal allergic vasomotor rhinitis or hay-fever associated with the inhalation of pollens, (*b*) Perennial or non-seasonal allergic vasometer rhinitis associated with the inhalation or ingestion of a variety of substances to which the patient has an allergic sensitivity, (*c*) Intrinsic vasomotor rhinitis where exhaustive investigations have failed to expose an allergic basis but which is possibly associated with the emotional make-up of the patient and based probably on endocrine dysfunction.

The approach to the diagnosis and treatment of the different varieties of vasomotor rhinitis is discussed and a plea is made for the condition, especially intrinsic vasomotor rhinitis, to be regarded not as a local nasal disease, but as a general disturbance of the psychological pattern of the patient in whom the nasal symptoms are the predominant ones.

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THE VALUE OF OPHTHALMODYNAMOMETRY IN GENERAL MEDICINE*

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For many years physicians have only relied on the brachial pressure readings to study and assess haemodynamics. The blood pressure varies in different parts of the vascular tree, consequently it was considered very probable that there may be marked difference in the pressure found in the large vessels supplying the brain from that in the brachial arteries. Unfortunately there was no simple clinical means of ascertaining this until the advent of Bailliart's Ophthalmodynamometer. With this instrument it is possible to measure the diastolic and systolic pressure in the central retinal artery, which reflects the tension in the internal corotid artery and this in turn gives one a good indication of the state of the cerebral vessels. This marks a very important step in the study of hypertensive disease, as only by a comparison between the retinal and the brachial blood pressures can one arrive at a logical basis of a rational understanding of the many symptoms of this malady.

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The ophthalmodynamometer measures the pressure in the central retinal artery on exactly the same principle as the sphygmomanometer, because by applying pressure

BAILLIART'S OPHTHALMODYNAMOMETER

to the eyeball by means of the footpiece of the instrument the eye is converted into a natural sphygmomanometer. Pressure is increased until the diastolic pressure in the retinal artery is reached, at which point pulsation is at its maximum. On increasing the pressure the amplitude of pulsation is gradually diminished and collapse of the artery occurs when the systolic pressure is reached.

Pulsation in the Retinal Vessels. Whereas venous pulsation is commonly observed, arterial pulsation cannot be seen in the normal individual as the amplitude is too small. Only in conditions where the pulse is of large amplitude as in aortic insufficiency, aortic aneurysm

and in thyrotoxicosis can a spontaneous arterial pulsation be observed at the optic disc. Pulsation is also observed under conditions of raised intra-ocular pressure whether due to pressure on the globe or glaucoma.

Technique. Patients with small pupils should have them dilated with a mild mydriatic. Generally it is quite unnecessary to instil a local anaesthetic into the conjunctival sac, except in the case of a very nervous or hypersensitive patient. The ophthalmoscope is held in the right hand and the tonometer in the left hand for examination of the right eye, and vice versa for the left eye. Pressure is applied to the sclera by the footplate about five millimetres from the limbus on the temporal side towards the centre of the eyeball, while one looks at the central retinal artery or one of its larger branches on the disc. At the moment arterial pulsation commences one notes the reading on the tonometer. This is the diastolic pressure. Pressure is now increased until the artery ceases pulsating. This is the systolic pressure. It is very important to do this examination quickly otherwise falsely high recordings will be obtained, because the tension forces fluid out of the eye.

Since Bailliart's monogram in 1923 a great deal of work has been done to make this a very exact science, and we are deeply indebted to the painstaking work of Streiff who states that ophthalmodynamometry is as precise as any accepted biological examination.

The Relationship between the Pressure Found in the Retinal Artery and the Brachial Artery. The normal retinal blood pressure is 30-35 diastolic to 70-75 systolic. But of greater significance is the ratio of the retinal and general blood pressures. E. B. Streiff was able to show after a statistical study of 283 normal subjects that the diastolic pressure in the retinal artery taken with Bailliart's instrument expressed in grammes is equal to half the humeral diastolic pressure expressed in millimetres of mercury. This relationship RBP—BP/2 is constant no matter how high the humeral blood pressure is. Furthermore, statistical studies demonstrate that if the retinal blood pressure is raised or lowered by ten grammes it is probably pathological, and definitely so if there is a discrepancy of 20 grammes. In other words it is important to know whether there exists a dissociation between the retinal and brachial pressures, because in over 80% of these cases we have found ocular or lesions elsewhere in the body. Two interesting illustrations of this are:

Case 1. Mr. D. Aged 42 years, who complained of headaches for several years. He gave a history of coronary thrombosis with typical electrocardiographic changes which occurred eight months previously, and stated that his blood pressure had always been normal. The retinal vessels were normal with no changes which could be attributed to arterio-sclerosis or hypertensive disease. Retinal blood pressure 130/65 mm. Hg. Brachial blood pressure 140/75 mm. Hg.

Comment. One comes to the conclusion here that this is a case of spasm not associated with arterio-sclerosis or hypertensive disease and one predicts a very good prognosis.

Case 2. Mr. W. Aged 44 years, who also complained of headaches but otherwise felt perfectly fit. On examination his retinal vessels showed fairly marked changes due to arteriosclerosis and a pin point round haemorrhage was observed in the right fundus just below his superior right macular artery. Retinal blood pressure was 130/90 mm. Hg. Brachial blood pressure 160/95 mm. Hg.

Comment. One predicts that this case may in the near future develop some serious vascular complication unless immediate treatment is instituted.

The disturbance of the retinal and brachial blood pressure ratio also supplies the answer to those cases of hyperpiesia who complain of headaches, giddiness and black spots in front of the eyes. In the same category fall the patients who have had a fairly high sphygmomanometer reading who respond to treatment but still have symptoms.

Cerebral Tumours. Ophthalmodynamometery is also of great assistance here as the pressure depends on the site of the tumour. When tumours are situated in the anterior or middle cranial fossae the retinal blood pressure is low or normal, whereas tumours in the posterior fossae are associated with the raised retinal blood pressure. It is sometimes difficult in cases of raised intracranial pressure to decide whether this is due to space-occupying lesions or an isolated cephalic hypertension. In the former the systolic pressure is greatly raised, whereas in the latter it is the diastolic pressure which is elevated.

Many more illustrations of the value of the instrument may be added but in conclusion mention must be made of the very low retinal diastolic pressure which is virtually pathognomonic of aortic valve lesions.

Finally having given a brief account of ophthalmodynamometry, it can be stated that it is a very useful part of the examination of every patient.

CLOSED INJURIES OF THE KIDNEY*

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Historical. Gustav Simon of Heidelberg in 1869 performed the first nephrectomy; his case was a ureteral fistula which followed ovarotomy. Credit for the first nephrectomy for closed rupture is given to Rawden of Liverpool, who in 1883 removed a ruptured kidney on the seventeenth day after the injury; death resulted from sepsis due to infected blood clot in the bladder. Keetly performed the first partial nephrectomy for trauma in 1890, and in 1894 Tuffier repaired a ruptured kidney with sutures.

In 1900 surgical intervention was accepted, but for

* This paper was read at the Medical Congress of the Association held at Cape Town in September 1949.

the most part the surgery was conservative. If the kidney was severely lacerated, it was removed. However, if possible, it was left in after securing haemostasis, usually by packing. About this time the overall mortality of 306 cases was 47%; in 222 cases the kidney was the only organ injured and the mortality was 30% (Kuster).

In 1922 the combined cases of Suter and Keller numbered 1,200; the overall mortality was under 20%. It is interesting that the number of conservative operations was larger than the nephrectomies.

In the last 20 years the introduction of pyelography, blood transfusion, chemotherapy and refinements in surgical technique have contributed to reducing the mortality. However, the increasing number of automobile accidents are responsible for many severe cases with multiple injuries, thus the overall mortality in some series will show little improvement in actual figures. Ferrier and Knigge analyse 137 cases; the overall mortality was 25%. In the opinion of the pathologist the kidney was mainly responsible for death in only 4.5%.

Incidence. This type of injury is not common although its incidence may be increasing. Cambell gives a figure of 1:3,000 admissions at the Bellvue Hospital, New Jersey, and at St. George's Hospital, London it only occurred once in every thousand surgical admissions. Obviously the incidence will vary in different institutions.

Aetiology. The kidney is for the most part protected by the lower part of the thoracic cage, therefore quite a large force is required to injure it. The commonest types are direct crushing forces or severe blows on the loin, which may or may not fracture the lower ribs. The kidney may be injured indirectly by falls on the buttock. Rarely gymnastic twists may pinch the lower pole between the twelfth rib and iliac crest. Campbell records a torn pedicle in an infant after a difficult delivery.

Pathology. The mechanism which best explains kidney ruptures by direct violence, is Kuster's theory. When a solid organ, filled with blood, is forcibly compressed, it tends to burst, producing radiating tears which are characteristic of the more severe injuries. The lower pole of the kidney may be bent over the twelfth rib, accounting for those cases where the lower pole is detached. The sharp ends of fractured ribs may actually perforate the kidney. Injuries due to indirect violence are probably due to the kidney flapping against the spine, or tense muscles.

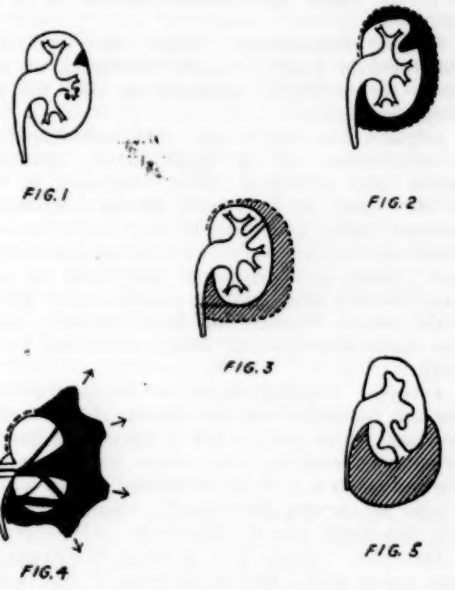
The types of lesion are diagrammatically illustrated in the four figures.

Figure 1, shows a mild contusion of the kidney with the true capsule intact. A subcapsular haematoma, with perhaps parenchymal bruising and sometimes a small laceration of a calyx.

Figure 2, illustrates a laceration of the cortex and true capsule, with a peri-renal haematoma limited by Zuckerkandl's fascia.

Figure 3, is similar to Figure 2 except that the pelvis has been opened and urine as well as blood is present under the peri-renal fascia. As the haematoma is confined within Zuckerkandl's fascia, there is a marked tendency for the haemorrhage to stop spontaneously.

Figure 4, illustrates the severely lacerated kidney where, in addition, the fascia of Zuckerkandl is torn. Haemorrhage is severe and there is little tendency for it to stop spontaneously. The blood extravasates widely



in the retro-peritoneal space and in the muscles of the back and abdominal wall. In adults the blood very rarely enters the peritoneal cavity; however, in children this is more common as the perinephric fat does not develop until puberty.

Two uncommon lesions are tears of the pedicle and rupture of the ureter. Tears of the pedicle, contrary to expectation are not always immediately fatal. Prather records a nephrectomy five days after injury; the pedicle was torn completely across. Occasionally trauma may be responsible for thrombosis of the major vessels. Rupture or thrombosis of the branches of the artery is probably fairly common, causing a variable degree of infarction and consequent atrophy.

Complications: *Sepsis*. The severely lacerated kidney, especially if a calyx has been opened, is most likely to become infected. The infection usually involves both the parenchyma and the perinephric tissues; it is frequently the precursor of secondary haemorrhage, which is an extremely dangerous complication, requiring prompt and radical treatment.

Stone Formation. Rupture of the kidney produces blood clot in the pelvis as a nucleus for the stone; it upsets the colloid—crystalloid balance, and also may produce infection. These factors are sufficient to form stones. However, very few cases in the literature demonstrate that no stone was present before the injury.

Hydronephrosis. There are three possible mechanisms in post-traumatic hydronephrosis:

(*a*) The organising peri-renal haematoma may constrict the upper third of the ureter.

(*b*) A stricture may form after a partial tear of the ureter.

(*c*) A blood clot may partially occlude the ureter.

In this connection mention should be made of hydrocalycosis which may follow healing of a lacerated calyx.

Pseudohydronephrosis. When the type of injury illustrated in Figure 3 is left untreated, an extrarenal cavity forms which communicates with the pelvis, as shown in Figure 5.

Johnson and Smith state that hydronephrosis, due to obstruction of the upper ureter, always accompanies this condition. Early treatment is desirable, as the walls of the cavity become infiltrated with calcium salts and adhere so firmly to adjacent structures that removal may be very hazardous (Colston). Early conservative drainage may lead to a urinary fistula, which usually heals readily, with preservation of the kidney. Braasch and Strom record a case of this type with hypertension, which was cured by nephrectomy.

Atrophy. Varying degrees of atrophy are common and are dependent on the extent of the vascular obstruction, which may be due to rupture of the vessel, or thrombosis resulting from either trauma or infection. The end result is a small contracted kidney with stunted calyces, all coming directly off a small pelvis. Theoretically this group may be associated with hypertension.

Aneurysm. About 30% of cases of aneurysm of the renal artery give a history of trauma; this type will by false aneurysm. It is of interest that false aneurysm mae follow nephrolithotomy or partial nephrectomy.

Miscellaneous. Trauma probably plays little part if any, in the causation of ptosis, neoplasm or tuberculosis of the kidney.

The Clinical Picture. The more severe cases frequently have multiple injuries, especially when they result from automobile accidents. Intra-peritoneal lesions such as rupture of the spleen, liver or bowel should be carefully excluded as they require urgent surgery, while it is distinctly uncommon for the ruptured kidney to demand immediate operation. Fractured ribs may be complicated by haemothorax, pneumothorax or both. Fractures of the pelvis with bladder or urethral injuries may further complicate the picture. Fortunately, according to statistics, the kidney is usually the only abdominal organ injured.

The symptoms of ruptured kidney will be discussed under separate headings:

1. *Haematuria.* Macroscopic haematuria occurs in at least 85% of cases. It may be absent when the ureter is torn, or where it is occluded by blood clot. It is generally accepted that the degree of haematuria does not give a reliable index of the extent of the damage, therefore treatment based on this fact alone is unsound. It is, however, desirable to assess progress by comparing the colour of successive specimens of urine.

Secondary haemorrhage usually occurs between the seventh and twenty-first day and is accompanied by clinical signs of infection. It may produce clot retention in the bladder. Generally, it is a dangerous sign and a prompt nephrectomy is the only treatment.

2. *Renal Mass.* Soon after injury the rigid loin muscles make palpation of the renal fossa difficult; the renal mass is best appreciated on the second or third day. The well-defined renal mass occurs in the types of injury illustrated in Figures 2 and 3, where the fascia of Zuckerkandl is intact. Where this fascia has been torn, blood extravasates widely in the retro-peritoneal tissues and muscles of the abdominal wall; clinically this is manifested as spreading tenderness, rigidity and dull percussion note towards the iliac fossa. Blood in the muscles of the back may simulate haemothorax, both clinically and radiologically.

Abdominal Distension. Traumatic retro-peritoneal haematomata are frequently accompanied by meteorism, known as 'the retro-peritoneal syndrome' or 'pseudoperitonism'. It may progress to a full-blown paralytic ileus. Occasionally it may be precipitated by hyperextending the spine or putting extension on a fractured femur.

Anuria. This symptom usually indicates an injury to the only functioning kidney. Turton's case shows that it may not occur until the eighth day. It occurs immediately when the only functioning kidney is removed. In the more complicated case the 'crush syndrome' should be borne in mind both as a cause of anuria and blood-stained urine.

Anuria should not be confused with retention, which usually results from blood clot in the bladder. It is more common with secondary than primary haemorrhage.

Diagnosis. In the first instance the diagnosis should be made on the clinical signs. The assessment of the extent of the damage to the kidney is difficult and it is for this reason that pyelography should be used. It not only shows the degree of injury but also whether a second functioning kidney exists.

Intravenous pyelography soon after the patient is admitted to hospital is frequently unsatisfactory, for function in the injured organ is temporarily suppressed. If it is done 48 or 72 hours later some function has usually returned.

It should be stressed that if the patient has a severe injury, and urgent surgery is required on clinical grounds, time should not be wasted on pyelography.

The various radiological features may be summarised:

A. *The Plain Picture.* Fractures of the lower ribs and lumbar transverse processes are common. The kidney shadow may be enlarged and may obliterate the psoas margin. The uninjured kidney outline may be visible.

B. *The Intravenous Pyelogram.* The minor injuries of the kidney show good function with some irregularities in the calyceal filling, and perhaps some filling defects due to blood clot. Swelling of the lower pole displaces the uretero-pelvic juncture and upper quarter of the ureter upwards and medially. Extravasation of dye into the kidney parenchyma is not uncommon.

If the injury is more extensive, segments of the kidney do not function and the pyelogram is usually incomplete. A most important sign is extravasation of the dye outside the true capsule; it may be necessary to take late pictures to demonstrate this point. A few cases show no function on the affected side.

In the majority, the intravenous pyelogram is quite satisfactory; however in a few cases it will not give all the desired information and retrograde pyelography is indicated. The dangers of increasing haemorrhage and introducing sepsis are obvious, therefore this method should be used with caution and should not be the routine procedure.

Treatment. The first step is to treat shock by usual methods including transfusions if necessary. If the clinical signs suggest an intra-peritoneal lesion, early laparotomy should be done after the shock has been controlled. Fortunately the kidney is usually the only abdominal organ injured and the following account deals only with this uncomplicated type.

The majority of kidney injuries are mild and are treated conservatively by rest in bed and sedatives and careful clinical observation of the general condition, the signs in the loin and the appearance of successive specimens of urine. The mild nature of the injury will be confirmed by intravenous pyelography. This type of case should ideally be kept in hospital for 14 days.

At the other end of the scale is the severely lacerated kidney, which requires urgent surgery. This type of case is uncommon. The indication to operate is progressive haemorrhage which is suggested by the following signs:

1. Shock which does not respond to adequate resuscitation.
2. Shock which recurs after discontinuing transfusion.
3. A rising pulse accompanied by the general signs of internal haemorrhage.
4. An increasing loin swelling, or, more commonly, spreading tenderness, rigidity and dullness towards the iliac fossa.

The degree of haematuria is not a reliable index of the extent of the renal damage, for many severely injured kidneys show little or no blood in the urine.

Most cases in this group will require nephrectomy, and it is therefore advisable to perform a quick chromocystoscopy to show that a second functioning kidney exists before proceeding to operation.

The intermediate group between these two extremes is a very important one, for it includes cases with severely damaged kidneys with mild clinical signs. The only sign which suggests a laceration of the kidney is a localised renal mass, best appreciated after 48 to 72 hours. Pyelography is extremely helpful in differentiating the severe case from the mild one. If the picture shows dye extravasated outside the capsule, operation should be undertaken, for as Priestley remarks, 'perirenal extravasation is a frequent cause of unsatisfactory conservative treatment'.

If operation is indicated it is best deferred until the third or fourth day, for bleeding will then be minimal and infarcted areas well defined. At operation the extent of vascular and parenchymal damage is assessed and either a nephrectomy or repair operation performed. If the general condition of the patient is poor, a nephrectomy is quicker and better tolerated. Repair of the ruptured kidney may be accomplished by mattress sutures or by ribbon catgut, and haemostasis by placing fat or oxycel in the laceration and stitching over it. Many writers maintain that the drainage of the perinephric haematoma prevents perinephritis and sclerosed kidneys.

If a urinary fistula follows conservative surgery, it usually heals spontaneously, but may require the assistance of ureteral catheter drainage.

The literature bristles with cases of severe laceration of the kidney with the patient in good condition. They frequently cause complications and then a nephrectomy is usually the only answer. Pyelography will detect these cases at an early stage and conservative surgery may be possible in some.

Chemotherapy is widely used as a prophylactic against infection; however, when blood and urine extravasate outside the capsule, it does not always prevent sepsis and secondary haemorrhage. Penicillin and sulphonamides although valuable give unreliable temperature charts and mask clinical signs; these facts are another argument in favour of routine pyelography.

All cases which have been treated conservatively should be followed up with periodic pyelograms, in order to detect complications early, when perhaps they will be amenable to conservative surgery.

The treatment of the various complications is outside the scope of this paper.

SUMMARY

(*a*) The clinical and pathological features of rupture of the kidney and its complications have been reviewed together with the salient historical points.

(*b*) Pyelography is strongly recommended as the most reliable method of assessing the extent of the damage to the kidney, and also is the best method of following up conservatively treated cases.

(*c*) Treatment by the three recognised methods; medical, repair or drainage operations and nephrectomy are discussed.

I would like to thank Mr. Scher and Mr. Currie for allowing me access to their cases, Mr. John Everidge for his encouragement and permission to use his gunshot wound cases and Mrs. de Waal who has been responsible for all the typing.

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VERENIGINGSNUUS : ASSOCIATION NEWS

INFORMATION FOR PUBLICATION ARISING FROM THE CODIFICATION OF THE STANDING ORDERS AND RULINGS RELATING TO THE REGISTRATION OF SPECIALITIES

(Submitted for Publication on the Direction of the Specialists Committee of the South African Medical and Dental Council)

1. *Procedure relating to the Lodging of Applications, Closing Date for Lodging Applications, etc.* The Specialists Committee (Medical) usually meets on the first Saturday of February, April, June, August, October and December to consider applications for the registration of specialities. All applications should be lodged one month before the meeting at which such applications are to be considered.

2. *Concessions to Applicants who have been on Military Service.* It is the intention of the Council that in the application of rule 12 to ex-service medical officers each case shall be judged on its merits, but that the standard demanded shall be approximately that of the rules in force prior to 1st January 1948. For the purpose of this ruling an ex-service medical officer shall be deemed to be a medical officer who served in the allied forces for a period of at least two years prior to July 1945.

Service in the army will not *ipso facto* be counted as specialistic training, but army experience will be accepted in certain circumstances if the work performed by the applicant justifies it; each case will be treated on its merits.

3. *Higher Qualifications—Acceptance of, and Interpretation of Term 'Certificate'.* (*Rule* 8—*Introduction.*) Rule 8 requires an applicant for the registration of his speciality to hold 'a degree, diploma or certificate . . ., etc.' The word 'certificate' in this rule shall be interpreted as hereunder: 'A certificate to be acceptable for the purpose of rule 8 of the rules relating to the registration of specialities must indicate a standard of knowledge and experience equivalent to a higher qualification, and must indicate that the applicant has had such training and experience as qualifies him for registration as a specialist in the subject he professes; a certificate should be given under the hand of a recognised authority and should detail the work performed by the applicant.'

4. *Acceptability of Period Served as an Intern for the Purpose of the Rule relating to Resident Appointments* (*Rule* 8 (b)). The period of one year's internship which graduates in medicine are required to do prior to registration as medical practitioners will be regarded as satisfying the requirement of a year's resident appointment.

5. *General Practice* (*Rule* 8 (c)). The only alternatives acceptable for two years in general practice are a locum tenens for a general practitioner, a partnership or assistantship with a general practitioner, a district surgeoncy, an approved post in an approved health centre or the Cape Town Free Dispensary.

A short service commission in the S.A.M.C. is not acceptable for the purpose of this rule, but is acceptable for the purpose of the rule relating to the requirement of a year's resident appointments (*vide* rule 8 (*b*)).

Where an applicant has been in general practice for a minimum period of three years over and above the two years prescribed by the regulations (i.e. five years in all), he will be given a remission of one year's training in medicine where this is prescribed in the rules (i.e. for the specialities Ophthalmology, Dermatology, Venereology, Pediatrics, Physical Medicine and Anaesthetics).

6. *The Basic Sciences* (*Rule* 8 (d) (*i*) *under Each Speciality*). A certificate issued by the responsible authority in a University to the effect that an applicant had done the number of hours prescribed for the various subjects in accordance with the regulations, will be accepted as satisfying the requirements of the regulation relating to the Basic Sciences.

The time devoted to the study of Anatomy II and Physiology II for the B.Sc. degree will be accepted as fulfilling the requirements relating to advanced study in Anatomy and Physiology. Work done as a graduate demonstrator to medical students in these subjects will similarly be deemed satisfactory for the purpose of this rule, provided acceptable certificates, stating that the applicant has done the number of hours prescribed for these subjects in accordance with the regulations, are issued by the responsible authorities in the University, and provided the work had been done as a post-graduate student, i.e. subsequent to qualification as a medical practitioner.

Applicants for the registration of their specialities who are in possession of diplomas, the examinations for which cover the basic sciences, will be exempted from those requirements of the basic sciences prescribed by the rules as have been covered by the examinations.

7. *Definition of a Teaching Hospital.* A teaching hospital is one which is attached to a medical school and used by it for teaching purposes; it does not include all hospitals where medical students may be sent for practical training.

8. *'Approved' Hospitals.* A list of approved appointments in 'approved' hospitals for each speciality is obtainable from the offices of the Council, and before accepting any post persons who intend to prepare themselves for the registration of their specialities should ascertain whether such a post will be acceptable to the Council as satisfying the requirements of the regulations relating to work performed in 'approved' hospitals. As the lists referred to above cannot be regarded as exhaustive, applicants who consider accepting appointments in hospitals which do not appear in the lists should apply to the Council to ask if such appointments will be approved; in order to enable the specialists committee to consider the matter, full information regarding the particular appointment and hospital should be furnished.

9. *Time Prescribed in Rules.* The time prescribed in the rules refers to calendar years and not to academic years.

10. *Nature of Acceptable Certificates to be Issued in Respect of Hospital Work for which Recognition is Desired.* Certificates submitted in respect of hospital work for which recognition is desired should be signed by the controlling authority of the hospital concerned; in the case of teaching hospitals the controlling authority issuing the certificate should be the University at whose corresponding teaching hospital the service has been performed. In order to be acceptable a certificate should:—

i. Be issued by the Chief of the firm on which the applicant has worked, and should be countersigned by the sponsoring authority, viz. the University;

ii. Be in sufficient detail to indicate the nature of the experience gained by the applicant and whether the experience has been such as will justify the Committee in accepting the period spent by the applicant as a post-graduate student or assistant as a period acceptable for the purpose of the rules relating to the registration of Specialities;

iii. Indicate whether the appointment was whole-time—only whole-time appointments will be acceptable;

iv. Indicate whether the appointment had been sponsored by a university and made by a hospital;

v. Indicate the numbers and status of the appointments in the firm, e.g. Chief, Assistant, Registrar, Clinical Assistants, Senior and Junior House Physicians and House Surgeons, etc.;

vi. Indicate the hours of attendance of the applicant;

vii. Indicate whether he wrote up case histories;
viii. Indicate what responsibility the applicant had in the hospital.

Note: It should be noted that two or more appointments cannot be held concurrently.

11. *Post-Graduate Studentships and Assistantships.* One year's work as a post-graduate student or assistant at the Groote Schuur Hospital or the Johannesburg Hospital under the aegis of the University will be acceptable as satisfying a maximum period of one year's experience in an applicant's speciality in terms of the rules relating to the registration of specialities.

It should be noted, however, that post-graduate courses where no responsible full-time post on the staff of a hospital is held, will receive no credit as 'satisfactory clinical experience.'

12. *Type of acceptable appointment for the purpose of the rule relating to clinical experience in an applicant's speciality.* As a general rule posts of the order of senior whole-time appointments are acceptable for the period prescribed for 'satisfactory clinical experience.'

13. *Status of casualty work.* Work in the casualty department of a hospital is not recognized as specialistic training in medicine or surgery in terms of the rules.

ACCEPTABILITY OF WORK PERFORMED AS A POST-GRADUATE STUDENT OVERSEAS*

The South African Medical and Dental Council is charged with the responsibility of fulfilling certain statutory obligations with regard to the registration of specialities. In actual fact by this is really meant the insertion after the name of a registered person of the speciality he professes.

After long deliberation, the Council submitted, for promulgation, to the Hon. the Minister of Health, certain rules and regulations regarding the registration of specialities in the various accepted fields of medical practice. These rules and regulations are at present the law of the land, and unless these are changed by state action, it is the responsibility of the Specialists Committee of the Council to apply these to applications received.

As a general rule, the following main demands have to be satisfied by applicants desirous of having their specialities inserted after their names in the medical register:

1. Qualified for at least five years;
2. Housemanship extending over one year, half the time being devoted to medicine and the other half to surgery;
3. Two years in general practice;
4. Higher professional status in the speciality concerned in the form of a higher qualification;
5. Advanced academic knowledge of basic sciences such as anatomy, pathology, physiology, physics and chemistry, these varying with the different specialities.
6. Specialistic experience in responsible posts in teaching institutions, and also experience in related subjects in approved institutions.

These general principles are rigorously applied to all applications received except that the Council has the prerogative to apply rule 12 to certain classes of ex-army applicants and also to certain professional men.

The Council has endeavoured to obtain as much information as possible from institutions abroad, and has evolved the necessary machinery to facilitate the assessment of the value of work performed overseas.

Council has always regarded posts with responsibility as the most important single requirement for specialistic status. It is of opinion that such posts ensure maximum benefit to the trainee and the future specialist.

* *Note*: This report was prepared by Prof. S. F. Oosthuizen, at the request of the Specialists Committee of the South African Medical and Dental Council, after a recent visit to Great Britain, during which he undertook an extensive enquiry into the set-up of post-graduate work in Great Britain and Eire. The Specialists Committee of the Council has considered the document and approves thereof.

Suggestions to Intending Specialists: With the above essential requirement in mind, it is the prospective specialist's responsibility to obtain the necessary experience. Council can accept no responsibility to create or to find such posts for intending specialists, but it has always endeavoured to help such individuals wherever possible. The following advice is given to intending specialists and this is based on Council's specific requirements for registration:

1. *House Appointments*: The requirement to do six months' surgery and six months' medicine as a houseman, is usually within the reach of candidates and needs no elucidation here. As a general rule, this requirement is strictly enforced.

2. *General Practice*: For the purpose of satisfying this requirement, general practice or locum tenency in general practice, certain health centre practices, full-time district surgeoncies and experience in the Cape Town Free Dispensary are acceptable to the Council. Work performed in the casualty departments of hospitals is, however, not regarded as fulfilling this requirement.

3. *Higher Qualification*: A higher qualification in the speciality concerned is required. The degree of Doctor of Medicine of South African, United Kingdom and Eire Universities, is accepted for the purpose provided the subject of the thesis has been selected from the particular field professed by the candidate. The M.D. of one of the above-named Universities is thus accepted not only for the speciality internal medicine, but also for dermatology, venereology, etc., provided the subject of the thesis was selected from this field.

The Master of Surgery degree of South African and United Kingdom and Eire Universities is similarly not only accepted for the purpose of satisfying Council's requirement with regard to a higher qualification in surgery, but also for allied specialities like otorhinolaryngology, ophthalmology, etc., provided the candidate professed the speciality at the examination.

The diplomas of membership (or fellowship) of the Royal Medical Colleges of London, Edinburgh and Ireland, the diplomas of fellowship of the Royal Colleges of England, Edinburgh and Ireland and the diploma of membership (or fellowship) of the Royal College of Obstetricians and Gynaecologists are similarly accepted as higher qualifications in the various fields enumerated. These diplomas are for the purpose of satisfying the requirement of a higher qualification, not confined to internal medicine or surgery, but also to allied specialities like dermatology in medicine and otorhinolaryngology or urology to surgery. The M.R.C.O.G. or F.R.C.O.G. is naturally confined to specialists in obstetrics and gynaecology.

Apart from these well-known diplomas carrying outstanding status, e.g. the M.R.C.P. (or F.R.C.P.), the F.R.C.S. and the M.R.C.O.G. (or F.R.C.O.G.), there are in existence a large number of diplomas offered by universities here and in the United Kingdom, and by the Conjoint Board of the various Colleges in the United Kingdom, which are usually accepted for the purpose of satisfying Council's requirement with regard to a higher qualification. The best known of these are the following:

D.L.O., R.C. & S., D.O.M.S., R.C.P. & S., D.M.R. of various local and overseas Universities, and of the Conjoint Board, the D.M.R.D. and D.M.R.T. of the Conjoint Board and various overseas Universities, the D.P.M., D.A., D.Phys.Med., D.C.P. of the Colleges and the Universities, etc. These are usually accepted for the purpose of satisfying Council's requirements. There are diplomas about which there is some dubiety particularly those where the diploma course does not include the full scope of the speciality. A diploma in pure obstetrics can thus not be accepted as satisfying the requirements of a higher qualification in obstetrics and gynaecology.

It must, however, be understood that (*a*) the obtaining of a diploma in a particular field does not by itself signify specialistic status, (*b*) these diplomas do not necessarily imply responsibility with regard to training and (*c*) the time devoted towards the obtaining of such diplomas cannot of necessity be accepted as fulfilling Council's requirement with regard to minimum periods of training.

In fields where there are no recognized diplomas, certificates may be accepted for the purpose of fulfilling Council's requirements in this respect. Certificates to be acceptable should, how-

ever, indicate a standard of knowledge and experience equivalent to a higher qualification, and should indicate that the applicant has had such training and experience as qualifies him for registration as a specialist in the subject he professes; a certificate should be given under the hand of a recognized authority and should detail the work performed by the applicant. Testimonials are not acceptable for this purpose.

4. *Advanced Study in Certain Basic Sciences*: Documentary evidence that the applicant has devoted a certain specified number of hours to certain basic sciences like anatomy, physiology, pathology, physics and chemistry must also be produced. These subjects vary from speciality to speciality and a minimum of 100 hours is usually expected. Exemption from those basic sciences if their study is included in the curriculum of the various post-graduate diplomas discussed above, is given on the submission of the necessary documentary evidence.

5. *Approved and Teaching Hospitals—Posts and Training*: It is outside the scope of this report to go deeply into this matter with regard to the South African institutions, except perhaps to remind readers of the following facts:

A period of time spent in a post acceptable to the Council for a period of some two to three years in a teaching hospital, is required for all specialities under the present regulations. To fulfil certain requirements with regard to experience in an allied field, work done in a non-teaching, but for the purpose of the Council's requirements 'approved', hospital, is accepted. To quote an example: intending specialists in Pediatrics, in addition to devoting two years to work in a responsible post in the Pediatric department of a teaching hospital, must also spend one year in a department of medicine and six months in a fever hospital. For such additional experience certain posts in certain approved non-teaching hospitals are acceptable.

Teaching Hospitals: Responsible full-time posts in the teaching hospitals of the three S.A. medical schools are acceptable to the Council with regard to the requirements under teaching hospitals.

Approved Hospitals: As an interim measure work performed in a full-time capacity in hospitals appearing in a subjoined list, is recognized provided the work is done in a hospital department under the supervision of a registered specialist in the particular field, where such specialist attends at least twice weekly, is on call at all times and personally supervises the activities of the applicant. The Hospitals approved under this heading are: Addington, McCord, King Edward VIII, Frere, Wynberg and New Somerset. Further information about these may be obtained from the Council's offices in Pretoria.

It must further be added that time spent as a post-graduate student or assistant at the various departments of the teaching hospitals of the University of Cape Town and the Witwatersrand may count for a maximum period of one year with the exception of the full-time course in radiology at the former university, which is accepted for the full two years. The clinical assistantships at Pretoria Hospital, being full-time appointments to the staff, count for the full period. *With regard to the position in England, Wales and Scotland*, work performed in responsible posts in the various Ministry of Health teaching Hospitals, are acceptable for the purpose of fulfilling Council's requirements with regard to work done in recognized posts in teaching hospitals. Such a list may be obtained from the Council's offices in Pretoria. In addition to the teaching hospitals, posts in the various hospitals listed by the British Post-graduate Medical Federation may be accepted for the purpose of fulfilling the Council's requirements with regard to approved hospitals. This list may also be obtained from Council's offices. For the purpose of elucidating the above, the following brief explanation may be given:

Under the National Health Service Act of 1946 it is provided that the Minister of Health, after consultation with the university concerned, may designate as a teaching hospital any hospital or group of hospitals, which appears to him to provide for undergraduate or post-graduate clinical teaching. England and Wales have been divided into 14 regions each of which centres on a university, and certain hospitals are designated by statutory order as teaching hospitals in these regions. Scotland is similarly divided into five such regions.

The British Post-graduate Medical Federation is incorporated by Royal Charter and is part of the University of London. It is concerned primarily in providing advanced education and research in general medicine, general surgery and their special branches, and with the training of specialists. In Scotland, an Edinburgh Post-graduate Board for Medicine is established with very similar functions. A special surgical training scheme is in existence at the Edinburgh school. A limited number of full-time post-graduate students is accepted every year on a four-year paid course during which period every attempt is being made to train them properly. During this period the candidates are expected also to pass the F.R.C.S. Ed. Similar schemes are being evolved also for other specialities.

The Council cannot accept work done by intending specialists who have merely attended various post-graduate courses offered in Great Britain (apart from e.g. the Edinburgh Surgical Training Scheme and others which are likely to follow) as fufilling the requirement 'satisfactory clinical experience as the holder of a clinical appointment in a teaching hospital'. It is essential that posts with responsibility be obtained, and this is the applicant's and not the Council's responsibility. The following posts are recognized by the Council for the purpose:—

1. Chief (e.g. chief surgeon, chief physician, professor);
2. Assistant chief (e.g. assistant surgeon, assistant physician, etc.);
3. Clinical tutor (Scotland);
4. Registrar (England and Wales);
5. House surgeon or house physician in a special *post-graduate hospital;*
6. Clinical clerk at:
   (*a*) National Hospital for Nervous Diseases, Queen Square, London.
   (*b*) Moorfield's Hospital, London (certain specially selected D.O.M.S. students).
   (*c*) Royal National Throat and Ear Hospital, London (specially selected D.L.O. students).
7. Post-graduate students doing the course in radiology at the University of London, Edinburgh, Liverpool.

Clinical assistantships and ordinary post-graduate studentships as known in Great Britain, cannot be accepted, as they do not necessarily imply any responsibility.

With regard to work done in *Continental Europe, Eire* and *North America*, full documentary evidence of the work done is required before applications will be considered. Furthermore, Council has evolved machinery of assessing the value of the work done at various hospitals in these countries, and a special sub-committee establishes liaison with overseas institutions and organizations in all doubtful cases.

It is recommended that intending specialists avail themselves of the information at their disposal at the Council's offices before embarking on any ventures about which there may be uncertainties.

COMPULSORY INTERNSHIP

THE FOLLOWING CORRESPONDENCE IS PUBLISHED FOR GENERAL INFORMATION

Letter addressed by the Medical Secretary to the Honourable the Minister of Health, dated 23 March 1950.

Dear Dr. Stals: The Medical Association of South Africa considered the question of compulsory internship at the recent meeting of its Federal Council in terms of the legislation before both Houses of Parliament.

The Amending Bill has now received the sanction of both Houses, but in a form never envisaged by the Association, which has always been in sympathy with the principle of internship; but it is felt that it is not yet too late to provide for compulsory internship with equity and justice for all concerned.

A memorandum setting forth the views of the Association is attached, and it would be appreciated if you would grant an interview to members representative of the Federal Council after you have perused it.

MEMORANDUM

COMPULSORY INTERNSHIP

ISSUES IN ORDER OF THEIR PRACTICAL IMPORTANCE

1. Degradation of the status of the intern.

2. The retrospective application of legislation affecting medical students.
3. Inadequacy of posts of requisite academic value.

1. DEGRADATION OF THE STATUS OF THE INTERN

The amending Bill effects the degradation of status of the houseman from that of 'resident medical officer' as contemplated in Section 22 (3) of the existing Act (in which he is recognised as a *registered medical practitioner* restricted only in so far as he is entitled to practice for gain in an approved institution) to an 'intern', and in terms of the amending Bill he is virtually a seventh-year medical student indentured to an institution, for the purpose of undergoing 'training'.

This alteration in the status of housemen was certainly never envisaged by many persons, medical and lay, who have long recognised the desirability of ensuring that every young graduate should enjoy the privilege of acquiring that skill, competence and judgment which flows from intimate association with a 'chief' in a teaching hospital. The assumption of *responsibility* under conditions where advice, guidance and assistance of leaders in his profession are available is an invaluable and coveted introduction to private and institutional practice where the young doctor may be forced to assume, unaided, the heavy responsibility of treating patients on his own account.

In the amending Bill the intern is recognised as a medical practitioner only in one respect; by the insertion in Section 96 of an addition to the definition of 'medical practitioner' of the words 'and, in relation to the keeping, sale or supply of poisons or habit-forming drugs, etc., . . . includes intern'. In every other respect the intern is not a 'medical practitioner', even though it has been provided under Section 34 (the section dealing with penalties for practising as a medical practitioner when unregistered) to add the words 'or intern' after the words 'medical practitioner' where they occur for the first time.

Sub-section (*b*) of Section 34 is being amended by the insertion after the words 'medical practitioner' of the words 'or intern', except where these words occur for the second time in this sub-section. This latter omission makes it clear that it will in fact be an offence under Chapter 3 of the Act for an intern to 'use the name of medical practitioner or any name, title, degrees or symbols indicating or calculated to lead persons to infer that he possesses a degree, diploma or other qualification as a medical practitioner'. This in fact imposes on the intern a duty to abnegate the degrees or qualifications which he actually possesses, and would thus seem to be in conflict with the provisions of the Act for the registering of qualifications, degrees and certificates. This point is made not only because it is important in itself, but because it serves to underline the degradation of status which the Bill is designed to introduce.

The recognition of the intern to the attenuated extent that he has been recognised in terms of the amendment to this section is clearly of a negative nature. It is not a positive recognition of his rights to 'perform acts pertaining to the calling of a medical practitioner'; it merely makes provision that he cannot be charged under Chapter 3 of the Act if at any time he does engage in such practices.

This alteration in status brings in its wake many serious problems not only for the intern himself, but for the persons or institution to which he has been indentured for training.

Can the intern perform any act whatever (except the prescription of a habit-forming drug) pertaining to the calling of a medical practitioner except under direct supervision and instruction of a registered person?

Can he perform such acts even under the direct supervision of a registered person?

Who would be responsible in law for such acts? The amending Bill makes it clear that the intern cannot be charged under Chapter 3 of the Act, but what is his position in common law and in relation to the numerous statutory provisions relating to 'medical practitioners'?

What would be the answers to these questions in relation to a case such as the following: An intern is on duty at night in a casualty department. A man is brought in slightly under the influence of liquor; he is fully conscious and rational and explains that he has received a blow on the head. Physical examination reveals nothing whatever to indicate serious injury. The intern allows him to go home and some hours later the man is found dead from the effects of cerebral compression due to intracranial haemorrhage. Whose is the legal responsibility? Can the intern appear in Court and testify as an expert witness? Can he issue a death certificate? Should he have called a registered person so that he could have been issued with instructions regarding the treatment of the case? etc.

The Registrar of the Medical Council has stated that he drafted the amending Bill on instructions from the Council to 'streamline' the provisions intended to be made in Section 22 (3) of Act 14 of 1946, for the reason that this section might be held to be invalid because of the absence of any definition of the term 'resident medical officer'. But if that was the intention, the Bill has strayed far from the provisions which were made at the time. To reiterate, this alteration in status was in the minds of few, if any, of those who approved compulsory internship. What was in their minds was that the provisions of section 22 (3) should be validated, if in fact this section is invalid. Nothing more, nothing less.

A few members of the South African Medical and Dental Council attempted to have the amending Bill reopened for discussion in the Council at its recent meeting, but this was defeated. However, regulations framed under the amending Bill were before the Council. In the form in which they were presented, it was clearly the intention that the purpose of internship was training under supervision. Under this heading there was discussion of some of the issues outlined above; and as a consequence, an attempt was made to reintroduce some element of dignity and responsibility for the intern in the detailing of his functions and duties. Reference to these regulations before and after their amendment by the Council will convince you that so far as the Council itself is concerned, this degradation of status was unintentional, and in so far as it was considered possible for the Council to do so, a belated attempt has been made to rectify the position. The difficulties of the legal draftsmen in providing for the registration of medical practitioners during their intern year conditionally upon their confining their practice to approved institutions, are appreciated; but surely it is not beyond the ingenuity of the legislature to prescribe the legal machinery which will give effect to this intention. (*Cf.* Missionary doctors have been restricted in a similar manner.)

2. THE RETROSPECTIVE APPLICATION OF LEGISLATION AFFECTING MEDICAL STUDENTS

This issue has been dealt with in extenso by Colonel Pilkington Jordan during the second reading and the committee stage in Parliament. Without detracting from the importance of the democratic principles at stake, this is a relatively minor issue in so far as its practical application is concerned when compared with the one to which pre-eminence has been given. As you know, there has been a great post-war influx of medical students in our medical schools. Most of these men and women have either just graduated or they will graduate during the next two years. Upon entering into the medical schools they had every reasonable prospect of being registered as medical practitioners upon the attainment of their degrees. Most of them would, undoubtedly, have availed themselves of such opportunities as exist in obtaining appointments as housemen. There may be instances where the deprivation of this right will cause some financial hardship or domestic dislocation (for married graduates) which they had not anticipated. The service of an internship in an institution where adequate facilities exist for their training will obviously be of benefit to these young graduates, whether they think so or not. No attempt is being made to justify the introduction of compulsory internship with retrospective application, but merely to put this isuue in its correct perspective in relation to the particular problem with which we are concerned. It may be of importance to mention that the United Kingdom intends to introduce legislaion for compulsory internship during this year and it is their intention that the provisions shall not apply to students who entered upon their course prior to the date of promulgation of the law, i.e. it will not be effective until 1957. It would have been a happy coincidence if it could have

been arranged by mutual agreement that all the reciprocating countries would have introduced such legislation simultaneously or at the most within a year or so of one another. As it is, the premature introduction of the enabling legislation (Section 22 (3)) has resulted in strained relations between the reciprocating countries and a rupture of reciprocity with Great Britain itself has been narrowly averted. On the other hand, one of the States of the Australian Commonwealth has in fact terminated reciprocity with South Africa because of our unilateral action in this matter.

3. INADEQUACY OF POSTS OF REQUISITE ACADEMIC VALUE

When the Medical Council first intimated its intention to appoint an Inspector of Internships and to implement compulsory intership by regulation, the Federal Council of the Medical Association of South Africa passed the following resolution:—

'It would be unfair to postpone registration of a graduate until after one year's post-graduate internship unless and until adequate provision is made for such internship in hospitals where conditions are of accepted educational value.'

This resolution was transmitted to the South African Medical and Dental Council on 1 September 1948, and it is unfortunate that this information did not reach the Minister concerned. Had it been transmitted, it would not have been possible for the Minister to say, 'but even if a small section of the profession had approached me, such objection would have weighed heavily with me and would have required our very serious consideration whether the promulgation of the regulations should be withheld'. It can be stated as a fact that the majority of the members of the Federal Council were not at all satisfied at the time that the regulations were promulgated, that there was a sufficient number of posts of approved academic value. There was serious criticism of the suggestion of creating posts in small mission hospitals and in mental hospitals, tuberculosis hospitals and health centres. It can be stated with equal certainty that posts such as these which have since been created, do not satisfy the criteria as envisaged by most of the members of the Federal Council. The extraordinarily difficult position in which the Inspector of Internships has been placed in regard to this matter during the last year is fully appreciated. The position during the coming two years will probably be equally unsatisfactory. After this, the limitation in numbers of medical students recently introduced into our Universities will begin to take effect and the larger proportion of the graduates will then be able to secure satisfactory appointments. In time, however, there will probably be more posts than there are interns as a result of the introduction of this system in abnormal times and this will result in dissatisfaction in the hospitals concerned.

The difficulties in which the Inspector of Internships and the Council have been landed temporarily, merely serve to confirm that it would have been wiser to delay the promulgation of these regulations until full justice could have been done to their intention. So acute is the position with regard to appointments that special provision has in fact been made to provide that the period of compulsory internship may be served with a registered medical practitioner in private practice. This is the final *reductio ad adsurdum* of the regulations at the present time.

Medical House,
Cape Town.
23 March 1950.

Reply by the Honourable the Minister of Health to the Medical Secretary, dated 17 April 1950

Dear Dr. Tonkin: In reply to your letter of 23 March 1950 on the subject of compulsory internship, I have to state that as the Bill has now been placed on the Statute Book (Act No. 13 of 1950), there would seem to be no purpose to be served by re-opening the whole matter.

In the circumstances it would seem to me that the interview sought on behalf of the Federal Council of your Association could serve no useful purpose.

PASSING EVENTS

WHOOPING COUGH NOTIFIABLE

The Minister of Health has declared that whooping cough is a notifiable disease within the municipal area of Cape Town from 28 April 1950.

'VIGOR'

Members will be interested in a quarterly journal called *Vigor*, which is published by the National Advisory Council for Physical Education. Its purpose is the promotion of physical education, healthful living, recreation and sport in general, and it is splendidly produced. Subscriptions of 5s. per annum can be paid to the Union Education Department, New Standard Bank Buildings, Pretoria.

ASSOCIATION'S BRONZE MEDAL: MR. J. J. LEVIN

The following is the citation which was read at the recent meeting of Federal Council when the Association's Bronze Medal was presented to Mr. J. J. Levin of Johannesburg:

'The Southern Transvaal Branch has great pleasure in nominating Mr. Joseph John Levin for the award of the Bronze Medal of the Medical Association of South Africa.

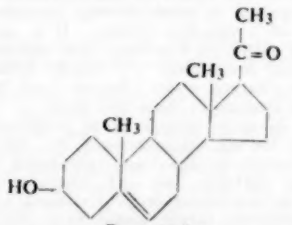
Mr. Levin must be known to nearly every member of the Association. In addition to being a well-known general practitioner, a district surgeon and later specialist surgeon in Johannesburg, Mr. Levin did a tremendous amount of work for the Association. He has been a member for many years and was Secretary of the Witwatersrand Branch of the British Medical Association from 1918 to 1922. He was President of the Southern Transvaal Branch of the Medical Association of South Africa in 1929. He was Organising Secretary of the Congress held in Johannesburg in 1931 and again Organising Secretary of the Congress at Lourenço Marques in 1938. He was a member of Federal Council for many years and did particularly valuable work as a Convener of the Workmen's Compensation Committee and the Central Assessment Committee from 1939 until 1942.

As Mr. Levin's health is now indifferent, he has been unable to take an active part in the affairs of the Association for the past few years, but there is no doubt that for his past services he fully deserves the recommendation of Federal Council, and the Southern Transvaal Branch has great pleasure in putting forward his name for this award.'

NEW PREPARATIONS AND APPLIANCES

'SHARMONE'

PREGNENOLONE ACETATE: FOR THE SYMTOMATIC TREATMENT OF RHEUMATOID ARTHRITIS



Pregnenolone
(Δ^5-pregnene-3beta-ol-20-one)

Arthritis has defied therapy for many decades. Recently there has been renewed interest in the treatment of rheumatoid arthritis because of a number of discoveries and observations. Preliminary reports indicate that Cortisone (Compound E) and ACTH (adrenocorticotropic hormone) possess great clinical efficacy in bringing about a remission in rheumatoid arthritis. However, ACTH and Cortisone do not cure the condition

and must be taken at regular intervals to prevent relapse. Unfortunately, both of these compounds produce many undesirable side-effects, such as hyperglycemia and other serious endocrine and physiologic disturbances. In addition, they are extremely expensive and so scarce as to be unavailable for any application other than clinical research.

Accordingly, the search has been for a product readily available, less expensive and generally free from serious toxic side-effects.

'Sharmone' Pregnenolone Acetate is one of a series of steroid hormones which has proved effective in the treatment of rheumatoid arthritis. 'Sharmone' Pregnenolone Acetate, though not as dramatic in its action as Cortisone and ACTH, however, does possess the great advantage of oral administration over protracted periods of time with freedom from toxic side-effects. 'Sharmone' Pregnenolone Acetate has been administered parenterally, but available clinical evidence does not suggest that the injectable form has any superiority over the oral method of administration.

Following oral administration of 0.3 gm. to 0.6 gm. 'Sharmone' Pregnenolone Acetate (3 to 6 tablets) per day, marked improvement was noted in approximately 50% of the patients treated, and an additional 37% showed mild improvement of symptoms. Improvement is characterised by diminution of pain and swelling, increased mobility of joints, greater functional capacity and lessening of fatigue. Relief is usually noted within a week to ten days after medication is started. A very important characteristic of 'Sharmone' therapy is that on discontinuance of medication, improvement apparently continues for longer periods and symptoms recur less rapidly than is the case with Cortisone and ACTH. Furthermore, once improvement is obtained, a maintenance dose may be established and continued over an indefinite period of time.

Reports following treatment with 'Sharmone' indicate no effect on weight or heart rate and that blood pressure in hypertensive patients remained unchanged. The diabetic condition of several patients treated was not altered. Glycosuria was not observed.

As is the case with other steroid hormones, the mode of action of 'Sharmone' Pregnenolone Acetate in rheumatoid arthritis is not known. It has the effect, however, of lowering the increased urinary excretion of 17-ketosteroids during periods of activity, which is believed to indicate a sparing action on the adrenal cortex.

'Sharmone' Pregnenolone Acetate is manufactured by Sharp & Dohme and is now available in South Africa.

BOOK REVIEW

CRIPPEN'S MURDER

The Trial of Hawley Harvey Crippen. Edited by Filson Young. (Pp. 211 + xxxv. With seven illustrations. 15s. Second edition.) London, Edinburgh and Glasgow: William Hodge & Company, Limited. 1950.

Contents: 1. First Day—Tuesday, 18 October 1910: Mr. Muir's Opening Speech for the Crown; Evidence for the Prosecution. 2. Second Day—Wednesday, 19 October 1910: Evidence for the Prosecution (continued). 3. Third Day—Thursday, 20 October 1910: Evidence for the Prosecution (concluded); Evidence for the Defence. 4. Fourth Day—Friday, 21 October 1910: Evidence for the Defence (concluded); Further Evidence for the Prosecution. 5. Fifth Day—Saturday, 22 October 1910: Further Evidence for the Defence. Appendices.

The fascinating trial of Dr. H. H. Crippen is now reprinted as a second edition. It first appeared 30 years ago, and the passing of the years has served only to add greater interest to this extraordinary crime.

The medico-legal points in this case are as much live issues to-day as they were 40 years ago when Crippen forfeited his life for what may even be regarded as a completely unnecessary murder.

Important from the point of view of the medical profession are the inferences which were drawn about the post-mortem interval as determined from the partial development of adipocere.

The medical evidence comprises a considerable portion of the book and records a battle of the giants. Mrs. Crippen's remains were sufficiently mutilated to make anatomical recognition of sex impossible, but it was known that she had had an operation for ovariotomy and a portion of the skin containing a scar and some of the abdominal aponeurosis became one of the most important exhibits.

Spilsbury (then a young giant) expressed very definite views about the naked-eye and the microscopic appearances of the alleged scar. Turnbull, a giant among pathologists and at the time Director of the Pathological Institute at the London hospital, expressed an entirely contrary view, which he afterwards modified. The result was that he was dealt with by the Judge in the following terms when addressing the jury (pp. 176 to 177): 'I remind you again that they were prepared up to 7 October to say that there was no aponeurosis at all, that there was nothing upon the skin or flesh which would enable you to put the piece of flesh into its place upon the body, that it came from the thigh or the buttock. When they are cross-examined they entirely abandon that position and say that the best opinion they can give now, with all their examination, is that it came from the place in which it was sworn that it came from by the witnesses for the Crown, namely, from the lower part of the abdomen. Gentlemen, you will, of course, consider all that evidence, but you must regard with some reserve the evidence of a man who has given such positive evidence that it was not the abdomen, and has abandoned that, and has fallen back upon there being no scar. If the appearance of the one sebaceous gland and the five follicles of hair is due to the fact that there was an included piece of epidermis, the whole matter is explained without any difficulty. It is entirely for you.'

The medical reader will find in this record excellent instructions about how to give expert testimony as well as how to avoid the many pitfalls inherent in this difficult task.

The case abounds in numerous other points of fascinating interest and this is certainly a book which should be in the possession of every pathologist and district surgeon.

CORRESPONDENCE

UTERUS DIDELPHYS COMPLICATED BY PLACENTA PRAEVIA AND BREECH PRESENTATION IN A PRIMIGRIVADA

To the Editor: Reduplication of the uterus, cervix and vagina due to failure of the Müllerian ducts to fuse, is uncommon.

Smith[1] reports that this abnormality is found 1:27,000 or 1:28,000 women and 1:15,000 pregnancies.

A number of cases of pregnancy in a uterus didelphys has occurred[2, 3, 4] and this case report is presented to add another case of pregnancy in a uterus didelphys to the literature.

An 18-year-old Native female was admitted to the Ladysmith Provincial Hospital at 5 p.m. on 1 February 1950 with a history of having bled fairly severely *per vaginam* for about 26 hours before admission.

She stated that she was in her ninth month of pregnancy and that her last menstrual period was 'somewhere in June or July'.

Physical Examination. Well developed native female, not distressed, but with slight anaemia of the conjunctivae. General condition, good.

Lungs. No physical signs of note.

Heart. Blood pressure, 110/80 mm. Hg. The heart was not enlarged.

Abdomen. The uterus was enlarged to the size of a nine months' pregnancy. Breech presentation. Back to the right, R.S.A. Foetal heart could be heard.

Pelvic Examination. The vagina was found to be divided by a central septum. There was bleeding from the right-sided vagina, on very gentle examination. The os was one finger dilated.

A cervix could be felt in the left vagina as well. The os was closed and no bleeding occurred from this side.

Because of the history of bleeding, and because the vaginal septum would almost certainly have obstructed labour, it was decided to deliver the patient by classical caeserian section.

6.30 *p.m.*: *Caeserian section under gas, oxygen and ether anaesthesia.* A female child was delivered weighing 5 lb. 7½ oz. The placenta was anterior and of the marginal type.

After closing the uterus the pelvis was examined and two complete uteri were found to be present. The left uterus was small and about 7 cm. in diameter. Each uterus had its own tube and ovary.

The sigmoid colon was found to pass down between the two uteri, and there was a well-developed recto-vesical ligament between the two uteri.

Her post-operative course was uneventful, and an intravenous pyelogram revealed no abnormality of the kidneys or ureters.

A speculum examination on 18 February 1950 revealed two vaginas each of which would only just admit two fingers, with two cervices lying side by side.

The patient was discharged on 18 February 1950.

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3. Taylor, H. C. (1943): Amer. J. Obstet. Gynec., **46,** 388.
4. Strean, G. J. and Portnuff, J. C. (1948): J. Obstet. Gynec., **55,** 41.

D. L. Ranking, M.B., B.Ch.Rand.
A. E. Pinneger, M.B., B.S.Lond.
Nora E. Senior, M.B., Ch.B.Leeds.
Ladysmith.
11 April 1950.

X-RAY TREATMENT IN DERMATOLOGY

To the Editor: I am glad to see that my somewhat sketchy paper on treatment of some non-malignant conditions by X-radiation has evoked some interest. Dr. Leeming's letter in the *Journal* of 22 April is welcome for stimulating interest in the matter and also shows the different points of view of radiology and dermatology in relation to treatment.

I think it can be said with some justification that we as radiologists are more aware of the dangers of our particular therapy than others can be, including the dermatologist. I would be the last to recommend that anybody who was not fully conscious of these dangers should ever use radiation as a therapeutic agent.

There are two general answers to Dr. Leeming's criticism. The first is that all patients seen by us are referred by other doctors and as a rule only after every other means of treatment has been tried.

The second is that the very large dosage which he criticizes is only given on a very small field. Those in plantar warts, for instance, are rarely as big as a centimetre. This not only diminishes the apparent dosage applied but also leaves healthy tissue in the immediate neighbourhood of the reaction. We have so far seen only three cases of trophic lesions on the sole of the feet and these all resulted from treatment with radium on callosities on skin vitiated by the pressure of the heads of the metatarsals in flat feet. One case also had previously been operated upon and the scar tissue further vitiated the treated area.

In a small community such as this I think that the formation of trophic ulcers would very rapidly be brought to our notice. Our predecessors and ourselves have had two unfortunate occurrences, one to a finger and one to a toe, which we thought were probably due more to over-enthusiastic self-treatment of the radiation reaction than to the radiation itself.

For his particular criticisms I would like to say the following:

1. *Capillary Haemangioma.* As is well known, these do not respond to radiation as satisfactorily as the cavernous type, but there are some which do respond to quite small dosage and this is tried always in the first instance.

For a decision whether to treat or not we think much depends on the size of the lesion. A capillary haemangioma the size of a half-crown on a girl's face is an unsightly lesion and a white scar which can very much more easily be covered by cosmetics is often greatly preferred by the patient. I think that each case of this type requires to be considered on its individual merits.

I have yet to meet a haemangioma which disappears automatically, but I have seen many which grow fairly rapidly and which would have been much more easily treated in the early weeks of life than later.

2. *Plantar Warts.* We have been more or less driven to the present form of treatment by the apparent inadequacy of any other form of treatment of the deep-seated wart in the thick integument of the sole. I would be grateful to hear what other form of treatment is effective in any number of cases. As noted in my general remarks, it is most important that the surrounding tissue should be shielded from radiation when the large dosages advised are applied; a field exceeding, one centimetre is rarely used. We are usually called upon because the doctors concerned are driven to desperation by these painful lesions on their patient's feet.

3. *Moles and Diathermy.* My remarks naturally apply only to those moles which require to be removed. The reason frequently is a cosmetic one.

We consider that diathermy is the safest procedure since it coagulates the cells it touches and therefore has no chance of dissemination of any abnormal type of cell. The coagulation must, of course, be carried beyond any pigmented layer. With care the resulting scar is less than can be obtained by surgery and one must be satisfied that the injured layer of cells which remains at any stage of diathermy must be beyond the pigmented layer. In these circumstances I fail to see how any danger can exist from diathermy coagulation.

As I said, I think radiation is contra-indicated in simple pigmented lesions. Its use in inoperable melanotic sarcomas is quite another problem.

4. *Leukoplakia.* I presume that the 800 r a day with high kilovoltage for six or eight days quoted for the treatment of leukoplakia is a misprint for 300 r. I think 800 r. would be a considerably higher daily dosage than would normally be applied by any radiologist. As these lesions are superficial we prefer to give a lower kilovoltage and have the maximum effect of radiation in the superficial parts.

5. *Dermatophytosis.* These cases again are only referred to us after the doctor concerned is driven to desperation by their persistence. We have developed to the stage of long-continued treatment as the result of apparent cures and recurrences after two or three months. Since we have adopted the long-continued method of treatment we have had no recurrences in many patients who were told they were probably incurable.

As I said in my paper, I have no idea what the *modus operandi* of radiation is, and whether it is a direct effect on the fungus or a chemical effect cannot be said.

I do not for a moment consider that radiation is a cure-all either of skin or other lesions. It is, however, successful in a reasonable number of cases where other forms of treatment have failed.

It must be remembered that a radiologist occasionally produces a trophic ulcer intentionally where this may be preferable to the primary lesion. This, however, mainly applies to recurrence of epitheliomata in scar tissue, where a trophic ulcer is unavoidable and is certainly preferable to leaving the lesion active. These cases are, of course, very few and far between.

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27 April 1950.

WHY DO MY PATIENTS LEAVE ME?

To the Editor: It was with great pleasure that I read Dr. J. F. Haegert's recommendation to *'Disillusioned'* to read Dr. C. P. Theron's article *Why do my Patients leave me?*

Although it is 20 years ago that I read this article, I was so impressed by it that I have on numerous occasions quoted passages of it *verbatim* to younger colleagues.

I am sure that if your *Journal* could reprint this magnificent article, full of the philosophy of a veteran member of our abused, overworked and underpaid profession, it would give great pleasure to us old guards, besides affording instruction and wisdom to our junior members of the profession.. I thank you in anticipation.

Willem P. Steenkamp, Jr.
S.A. Mutual Building,
Darling Street,
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1 May 1950.